Amendments to the Specification:

Please replace the paragraph at page 9, from line 15 through line 24, with the following paragraph:

> -- The use of no or low electroosmotic flow is of increasing importance as advancements are being made in the coating of capillaries and microchannels to minimize analyte adsorption to the capillary or microchannel walls. Such coatings allow for minimal interaction between samples and the walls of the device; less interaction relates to smaller sample losses. Reducing sample loss means smaller quantities of starting materials can be utilized. The generation of electroosmotic flow requires the presence of ionizable groups on the surface of the capillary or microchannel channel walls. However, these ionizable groups also lead to unwanted to charge based interactions that can lead to sample loss and peak broadening. Minimizing or negating charge interactions at the capillary or microchannel wall/solution (solid/liquid) interface is necessary to avoid these interactions.--

Please replace the paragraph at page 9, from line 15 through line 24, with the following paragraph:

-- Many coatings including but not limited to, ~~Triton X 100~~TRITON X-100® (4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol, may be used to coat the channels 23, 24. Those of skill in the art will recognize that many coatings are within the spirit and scope of the present invention. There are many types of coatings, including but not limited to, dynamic coatings, covalent modifications to the channel surface, and self-assembled monolayers.--

The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (Currently amended) A bi-directional capillary electrophoresis device, comprising:

a middle column;

the middle column intersecting a first uncharged channel having a coating and a second uncharged channel having a coating at an intersection point wherein the middle column is approximately perpendicular to the first uncharged channel and the second uncharged channel; ~~and~~

the first uncharged channel engaged to a first microfluidic system for proteome analysis; and

a negative electrode in communication with the first uncharged channel and a positive electrode in communication with the second uncharged channel,

wherein a mixture of anions and cations may be separated by drawing the cations toward the negative electrode and drawing the anions towards the positive electrode.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Currently amended) The device of claim 3 wherein the coating is ~~Triton X-100~~TRITON X-100® (4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol.

6. (Original) The device of claim 1 wherein a detector is in communication with the first uncharged channel.

7. (Original) The device of claim 1 wherein a first detector is in communication with the first uncharged channel to detect cations and a second detector is in communication with the second uncharged channel to detect anions.

8. (Original) The device of claim 1 further comprising a hydrodynamic flow resistor positioned in the first uncharged channel.

9. (Original) The device of claim 1 further comprising a pressure outlet.

10. (Original) The device of claim 1 wherein a dual channel detector is in communication with the first uncharged channel and the second uncharged channel.

11. (Original) The device of claim 1 wherein the first uncharged channel is a capillary.

12. (Currently amended) A microfluidic bi-directional capillary electrophoresis device, comprising:

a middle column;

the middle column intersecting a first uncharged channel <u>having a coating</u> and a second uncharged channel <u>having a coating</u> at an intersection point wherein the middle column is approximately perpendicular to the first uncharged channel and the second uncharged channel; ~~and~~

<u>the first uncharged channel engaged to a first microfluidic system for proteome analysis; and</u>

a negative electrode in communication with the first uncharged channel and a positive electrode in communication with the second uncharged channel,

wherein a mixture of anions and cations may be separated by drawing the cations toward the negative electrode and drawing the anions towards the positive electrode.

13. (Canceled)

14. (Currently amended) The device of claim ~~13~~<u>12</u> wherein the second uncharged channel is engaged to a second microfluidic system for proteome analysis.

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Currently amended) The device of claim 16 wherein the coating is ~~Triton X 100~~TRITON X-100® (4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol.

19. (Original) The device of claim 12 wherein a detector is in communication with the first uncharged channel.

20. (Original) The device of claim 12 wherein a first detector is in communication with the first uncharged channel to detect cations and a second detector is in communication with the second uncharged channel to detect anions.

21. (Original) The device of claim 12 further comprising a hydrodynamic flow resistor positioned in the first uncharged channel.

22. (Original) The device of claim 12 further comprising a pressure outlet.

23. (Original) The device of claim 12 wherein a dual channel detector is in communication with the first uncharged channel and the second uncharged channel.

24. (Currently amended) A method of separating a sample of anions and cations, comprising:

delivering the sample to a middle column of a bi-directional capillary electrophoresis device;

providing a first uncharged channel having a coating and a second uncharged channel having a coating approximately perpendicular to the middle column wherein the middle column intersects the first uncharged channel and the second uncharged channel at an intersection point;

engaging the first uncharged channel to a first microfluidic system for proteome analysis;

positioning a negative electrode in communication with the first uncharged channel thereby drawing cations into the first uncharged channel; and

positioning a positive electrode in communication with the second uncharged channel thereby drawing anions into the second uncharged channel.

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Currently amended) The method of claim 26 wherein the coating is ~~100 Triton-X~~TRITON X-100® (4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol.

29. (Original) The method of claim 24 further comprising:

placing a detector in communication with the first uncharged channel to detect cations.

30. (Original) The method of claim 29 further comprising:

placing a detector in communication with the second uncharged channel to detect anions.

31. (Original) The method of claim 24 further comprising:

placing a dual channel detector in communication with the first uncharged channel and the second uncharged channel.

32. (Original) The method of claim 24 further comprising:

placing a hydrodynamic flow resistor in communication with the first uncharged channel.

33. (Currently amended) A method of separating a sample of anions and cations on a microfluidic device, comprising:

delivering the sample to a middle column of a bi-directional capillary electrophoresis device;

providing a first uncharged channel having a coating and a second uncharged channel having a coating approximately perpendicular to the middle column wherein the middle column intersects the first uncharged channel and the second uncharged channel at an intersection point;

engaging the first uncharged channel to a first microfluidic system for proteome analysis;

positioning a negative electrode in communication with the first uncharged channel thereby drawing cations into the first uncharged channel; and

positioning a positive electrode in communication with the second uncharged channel thereby drawing anions into the second uncharged channel.

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Currently amended) The method of claim 35 wherein the coating is ~~100 Triton-X~~TRITON X-100® (4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol.

38. (Original) The method of claim 33 further comprising:

placing a detector in communication with the first uncharged channel to detect cations.

39. (Original) The method of claim 38 further comprising:

placing a detector in communication with the second uncharged channel to detect anions.

40. (Original) The method of claim 33 further comprising:

placing a dual channel detector in communication with the first uncharged channel and the second uncharged channel.

41. (Original) The method of claim 33 further comprising:

placing a hydrodynamic flow resistor in communication with the first uncharged channel.

42. (Canceled)

43. (Currently amended) The method of claim ~~42~~33 further comprising:

engaging the second uncharged channel to a second microfluidic proteome analysis system.